REMARKS

Claims 1, 7, 19, 22 and 28 have been amended to further define the invention. Claims 1-11 and 19-31 are pending in the application. Entry of the amendments and favorable reconsideration and allowance of the application is respectfully requested in light of the remarks which follow.

In a response to the First Office Action (dated September 12, 2002) that was mailed December 12, 2002, a Proposed Changes to Drawings was filed in which amendments were proposed to Figures 1-6. In the Final Office Action dated March 25, 2003, the Examiner did not indicate whether the proposed changes to the drawings were approved. Approval of the proposed drawing changes is hereby respectfully requested.

1. Claim Rejections – 35 U.S.C. § 103(a)

Claims 1-11 and 19-31 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Wong et al. ("Wong"; U.S. Pat. No. 6,260,021) in view of Mason et al. ("Mason"; U.S. Pat. No. 5,668,998). Claims 1, 7, 19, 22 and 28 have been amended to further define the invention.

A. Allowability of Independent Claim 1 and Dependent Claims 2-6 and 28-31

Amended claim 1 is directed towards a data management system for patient data and requires, among other limitations, a first container having a first user interface code segment, a second component having a second user interface code segment and a container application having a first user interface layer in communication with a first component and a second user interface layer in communication with a second component where the first and second user interface layers are configured to convert the first user interface code segment and the second user interface code segment to a uniform user interface. As discussed in an exemplary embodiment in the specification, the container application can be configured to integrate the functionality of a first component (e.g., a PACS component), a second component (e.g., a RIS component) and other components. The first component and the second component each include a respective functionality and user interface. The user interface layers of the container application control the user interfaces of the first and second components. In this exemplary

embodiment, the user interface layers can be configured to convert the user interfaces of the first and second components to a uniform user interface format.

In contrast, neither Wong nor Mason teaches or suggests a container application with first and second user interface layers configured to convert a first user interface code segment and a second user interface code segment into a uniform user interface. Rather, Wong teaches a three-tiered object-oriented system for medical image distribution. The third tier includes client systems that have object-oriented GUI's (graphic user interfaces). Wong, column 8, lines 53-59. Wong discloses:

> "In a preferred embodiment, the client GUI is implemented as an object-oriented interface, components of which are downloaded as needed from image server 12." Wong, Figure 1, col. 8, lines 65-67.
>
> "In the preferred embodiment, the Java application or applets can be downloaded dynamically when a health-care user accesses the image distribution system and requests particular image data. In that manner, the GUI appropriate for the particular user, the particular workstation, and the particular image data can be made available at any user access equipment. Since the GUI components necessary for particular information or images are downloaded with the images, the most appropriate image display can always be assured throughout the system." Wong, col. 9, lines 8-18.
>
> "Alternatively, where the network links to a particular workstation have low bandwidth, certain base GUI components can be cached on the workstation. In a further alternative, the entire GUI can be present on the workstation and coded in another object-oriented language, such as C++." Wong, col. 9, lines 25-30.
>
> "[W]eb server 56 provides infrastructure, non-object-oriented functions necessary for initiating and maintaining user sessions. . . .After a session is started, this server downloads GUI components as needed for the medical image and report information to be displayed." Wong, col. 12, lines 6-15.
>
> "Web server data segment 94 primarily includes data needed for download to client workstations. This data includes initial presentation information stored in HTML/XML page component 96. The web server also downloads appropriate components of the GUI as needed for entry of users requests

and for display of image data." Wong, Figure 3, col. 13, lines 34-44.

Wong teaches that when a request for image data is made, the client system downloads the appropriate GUI for the particular image data, as needed. Wong, however, does not disclose, teach or suggest a container application having first and second user interface layers configured to convert a first user interface code segment of a first component and a second user interface code segment of a second component, respectively, to a uniform user interface.

At paragraph 3(A) on pages 2-3 of the Final Office Action, the Examiner acknowledges that "Wong does not explicitly disclose wherein the first and second user interface layers are configured to communicate patient data between the functionality code segments of the first and second components, respectively, and a common user interface." At paragraph 4(A) on pages 10-11 of the Final Office Action, however, the Examiner states that "Wong discloses the claimed interface layers. . ." The Examiner cites to the interface engines 32 and 24 in Figure 1. However, these interface engines, CIIE 32 and CRIE 24 are not user interface layers. Rather, Wong teaches that the CIIE 32 interfaces between the PAC system 26 and medical image server 12 and is used to translate client requests and a response/image data from one standard or protocol to another, e.g., a client request may be sent to CIIE 32 according to the CORBA/IIOP protocol and the CIIE 32 converts the client request to an equivalent PAC system request such as DICOM compliant. Wong, col. 7, lines 39 to 58 and col. 11, lines 4-16. CRIE 24 serves a similar function as an interface between the medical image server 12 and an RI system 18. Wong, col. 7, line 59 to col. 8, line 14 and col. 11, lines 4-16.

Further, Mason does not teach or suggest a container application with first and second user interface layers configured to convert a first user interface code segment and a second user interface code segment to a uniform user interface. Rather, Mason teaches an application program interface (API) that provides objects or values which an application programmer can use to create an application computer program which provides DICOM (Digital Imaging and Communication in Medicine) services and conforms to the DICOM standard protocol for PACS networks. Mason, column 1, line 66 to column 2, line 11 and column 3, lines 16-24 and lines 57-65. An application program interface (API) is used to assist a programmer with

the development of computer applications. Mason, column 1, lines 48-63. Mason, however, does not disclose, teach or suggest a container application with first and second user interface layers configured to convert a first user interface code segment and a second user interface code segment to a uniform user interface.

Therefore, neither Wong nor Mason, either alone or in combination, teaches or suggests a container application with first and second user interface layers configured to convert a first user interface code segment and a second user interface code segment to a uniform user interface. Accordingly, amended claim 1 is believed to be allowable.

Claims 2-6 and 28-31 depend from amended claim 1 and incorporate all of the limitations of amended claim 1 and are therefore allowable over Wong in view of Mason for, among other reasons, the same reasons as given above with respect to amended claim 1.

Accordingly, claims 1-6 and 28-31 are believed to be allowable. Withdrawal of the rejection under 35 U.S.C. § 103(a) and allowance of claims 1-6 and 28-31 is respectfully requested.

B. Allowability of Independent Claim 7 and Dependent Claims 8-11

Amended claim 7 is directed towards a data management system for patient data and requires, among other limitations, a first application having a first user interface, a second application having a second user interface and a data manager that includes a user interface code segment for converting the first user interface and the second user interface to a uniform user interface. The user interface code segment also generates display signals based on the patient image data and the patient text data according to a predetermined display format. As discussed above, in one embodiment, the data manager can be configured to integrate the functionality of a first application (e.g., a PACS application), a second application (e.g., a RIS application) and other applications. In particular, the data manager can be configured to convert the user interfaces of the first and second applications to a uniform user interface format.

In contrast, neither Wong nor Mason teaches or suggests a data manager including a user interface code segment in communication with first and second applications for

converting the first user interface and the second user interface to a uniform user interface. Rather, as discussed above with respect to amended claim 1, Wong teaches that when a request for image data is made, the client system downloads the appropriate GUI for the particular image data, as needed. Wong, col. 9, lines 8-21. Wong, however, does not disclose, teach or suggest, a data manager that includes a user interface code segment for converting the first user interface of a first application and the second user interface of a second application to a uniform user interface.

Further, as discussed above with respect to amended claim 1, Mason teaches an application program interface (API) that provides objects or values which an application programmer can use to create an application computer program which provides DICOM (Digital Imaging and Communication in Medicine) services and conforms to the DICOM standard protocol. Mason, column 1, line 66 to column 2, line 11 and column 3, lines 16-24 and lines 57-65. There is, however, no discussion in Mason of a data manager including a user interface code segment for converting the first user interface and the second user interface to a uniform user interface.

Therefore, neither Wong nor Mason, alone or in combination, teaches or suggests a data manager including a user interface code segment in communication with first and second applications for converting the first user interface and the second user interface to a uniform user interface. Accordingly, amended claim 7 is allowable over Wong in view of Mason for, among other reasons, the same reasons as given above with respect to amended claim 1.

Claims 8-11 depend from amended claim 7 and incorporate all of the limitations of amended claim 7 and are therefore allowable over Wong in view of Mason for, among other reasons, the same reasons as given above with respect to amended claim 7.

Accordingly, claims 7-11 are believed to be allowable. Withdrawal of the rejection under 35 U.S.C. § 103(a) and allowance of claims 7-11 is respectfully requested.

C. Allowability of Independent Claim 19 and Dependent Claims 20-21

Amended claim 19 is directed towards a data management system for patient data and requires, among other limitations, third means for converting first user interface means and

second user interface means to a uniform user interface and for displaying the patient image data and patient text data according to a predetermined display format. As discussed above, with respect to amended claim 1, one exemplary embodiment of the data management system can include means configured to integrate the functionality of a PACS application and a RIS application, e.g., converting the PACS and RIS user interfaces to a uniform user interface format.

As discussed above with respect to amended claims 1 and 7, neither Wong nor Mason, alone or in combination, teaches or suggests third means for converting first user interface means and second user interface means to a uniform user interface. Therefore, amended claim 19 is allowable over Wong in view of Mason for, among other reasons, the same reasons as given above with respect to amended claims 1 and 7.

Claims 20-21 depend from amended claim 19 and incorporate all of the limitations of amended claim 19 and are therefore allowable over Wong in view of Mason for, among other reasons, the same reasons as given above with respect to amended claim 19.

Accordingly, claims 19-21 are believed to be allowable. Withdrawal of the rejection under 35 U.S.C. § 103(a) and allowance of claims 19-21 is respectfully requested.

D. Allowability of Independent Claim 22 and Dependent Claims 23-27

Amended claim 22 is directed towards a method for displaying patient data from a plurality of applications and requires, among other things, converting a first user interface of a first application and a second user interface of a second application to a uniform user interface and configuring both patient image data and patient text data according to a predetermined display.

As discussed above with respect to amended claims 1 and 7, neither Wong nor Mason, alone or in combination, teaches or suggests converting a first user interface of a first application and a second user interface of a second application to a uniform user interface. Therefore, amended claim 22 is allowable over Wong in view of Mason for, among other reasons, the same reasons as given above with respect to amended claims 1 and 7.

Claims 23-27 depend from amended claim 22 and incorporate all of the limitations of amended claim 22 and are therefore allowable over Wong in view of Mason for, among other reasons, the same reasons as given above with respect to amended claim 22.

Accordingly, claims 22-27 are believed to be allowable. Withdrawal of the rejection under 35 U.S.C. § 103(a) and allowance of claims 22-27 is respectfully requested.

CONCLUSION

Applicant believes that the present application is now in condition for allowance. In view of the foregoing amendments and remarks, favorable reconsideration and allowance of the application is respectfully requested. Should the Examiner have any remaining questions, the Examiner is invited to contact the undersigned at the telephone number appearing below.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.116-1.17, or credit any overpayment, to Deposit Account No. 50-2401.

Respectfully submitted,

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